

Claims

What is claimed is:

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1. A process for reusing circuit boards, comprising:

- a) determining a type of solder used on a populated circuit board;
- b) selecting a bio-slurry designed to remove the type of solder; and
- 10 c) separating the populated circuit board into a plurality of components and a circuit board.

2. The process of claim 1, further including the steps of:

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d) separating the plurality of components into a first group of reusable components and a second group of recyclable components.

3. The process of claim 2, further including the steps of:

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- e) pulverizing at least a portion of the second group of recyclable components into a plurality of pieces; and
- f) placing the pieces in a second bio-slurry to separate a metal.

4. The process of claim 3, wherein step (e) includes the step of:

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e1) selecting the at least the portion of the second group of recyclable components, based on a type of metal present.

5. The process of claim 2, further including the steps of:

e) segregating the first group of reusable components into a plurality of classes of components.

5 6. The process of claim 1, wherein step (a) further includes the step of:

a1) determining if the type of solder contains lead.

10 7. The process of claim 1, further including the step of:

d) separating a water from the bio-slurry to form a sludge;

e) separating a metal from the sludge.

15 8. A process for recycling circuit boards, comprising the steps of;

a) selecting a bio-slurry to remove a solder of a populated circuit board;

b) immersing the populated circuit board in the bio-slurry; and

20 c) separating the populated circuit board into a plurality of components and a circuit board.

9. The process of claim 8, further including the step of:

25 d) pulverizing the circuit board into a plurality of pieces;

e) placing the plurality of pieces in a second bio-slurry.

10. The process of claim 8, wherein step (a) further includes the step of:

a1) identifying a type of solder used on the populated circuit board.

11. The process of claim 10, wherein step (a1) further includes the step
5 of determining if the type of solder includes lead.

12. The process of claim 10, further including the step of:

a2) selecting the bio-slurry based on the type of solder.

13. The process of claim 8, further including the step of:

d) separating the plurality of components into groups.

14. The process of claim 13, further including the step of:

e) determining for each of the groups if any components therein contain
15 lead.

15. The process of claim 14, further including the step of:

f) pulverizing any group of components that contain lead to form a plurality
20 of pieces;

g) placing the plurality of pieces in a bio-slurry.

16. A process of recycling circuit boards, comprising the steps of:

- a) grinding a circuit board into a plurality of pieces;
- b) placing the plurality of pieces in a bio-slurry; and
- c) extracting a metal.

17. The process of claim 16, wherein step (a) further includes the step of:

- a1) determining a level of lead content in a circuit board;
- a2) when the level of lead does not exceed a predetermined threshold, selecting a first type of bio-slurry.

18. The process of claim 17, further including the step of:

- a3) when the level of lead does exceed a predetermined threshold, selecting a second type of bio-slurry.

19. The process of claim 16, further including the step of:

- d) removing a liquid from the bio-slurry;

20. the process of claim 19, further including the step of:

- e) processing the liquid to have a non-contaminated water.